9

CLAIMS:

1.   A method for generating magnetic resonance images using a magnetic resonance apparatus (1), the method comprising the steps:
-          acquiring a reference scan,
-          providing the magnetic resonance apparatus (1) with a target value of a specific scan parameter, and
-          determining, by the magnetic resonance apparatus (1) and based on reference scan data, an optimum scan parameter set according to the target value of the specific scan parameter.

2.   The method as claimed in claim 1, wherein the reference scan data include sensitivity data for each coil element (5) of the magnetic resonance apparatus (1) for each voxel.

3.   The method as claimed in claim 1, wherein the optimum scan parameter set is determined for a defined region of interest.

4.   The method as claimed in claim 1, wherein the specific scan parameter is the scan time.

5.   The method as claimed in claim 1, wherein the specific scan parameter is the signal-to-noise ratio.

6.   The method as claimed in claim 1, wherein the determining of the optimum scan parameter set comprises the step:
-          determining the image noise for a number of predetermined scan parameter sets.

7.   The method as claimed in claim 6, wherein the predetermined scan parameter sets include sets with different orientations of the phase encode direction.

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8.   The method as claimed in claim 6, wherein the predetermined scan parameter sets include sets with different RFOV.

5   9.   The method as claimed in claim 1, comprising the further step:
-        automatically performing a scan using the determined optimum scan parameter set.

10.   An apparatus (1) for generating magnetic resonance images comprising:
10   -   an acquisition device (2) for acquiring a reference scan,
-        an operating device (3) for providing the apparatus with a target value of a specific scan parameter, and
-        a control device (4) for determining, based on reference scan data, an optimum scan parameter set according to the target value of the specific scan parameter.

15

11.   A computer program for generating magnetic resonance images using a magnetic resonance apparatus (1) comprising:
-        computer instructions to acquire a reference scan,
-        computer instructions to provide the magnetic resonance apparatus (1) with a
20   target value of a specific scan parameter,
-        computer instructions to determine, based on reference scan data, an optimum scan parameter set according to the target value of the specific scan parameter,
when the computer program is executed in a computer (10).